

GM 35743

REPORT ON THE BEACON PROPERTY

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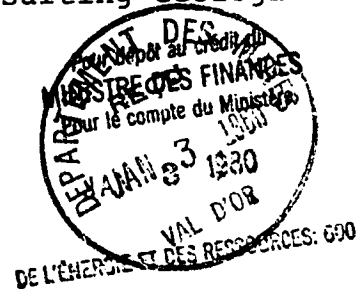
REPORT
ON THE BEACON PROPERTY
DOR VAL MINES LIMITED
LOUVICOURT TOWNSHIP
QUEBEC, CANADA

Ministère de l'Énergie et des Ressources
Gouvernement du Québec
Documentation Technique

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December 17, 1979

Jean Descarreaux, Ph.D.
Consulting Geologist



REPORT
ON THE BEACON PROPERTY
DOR VAL MINES LIMITED

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SUMMARY

The Beacon property was recently acquired by Dor Val Mines Limited. It consists of 32 contiguous blocks and claims for a total of 1737 acres, located in Louvicourt township, northwestern Quebec. It is very easy of access within the Val d'Or mining district.

Gold was first discovered in 1930 on the property. Two shafts, various surveys and a lot of drilling have been done over the years. Several gold zones and copper zones have been discovered. The best gold occurrences is the Beacon gold zone with ore reserves estimated at 37,000 tons averaging 0.60 ounce of gold per ton. A shaft, 4 levels and linear developments were done in 1949-50 to develop this zone. Approximately 10,000 tons of ore averaging 0.20 ounce of gold have been delineated in the past on the Le Roy vein. However this vein and two other zones found within the granodiorite near the contact with the volcanics warrant additional drilling. The best copper zone ("E") is estimated to contain 150,000 tons of ore averaging 1.75% and it is still open.

The going price of gold and the geological informations now available from the adjoining Belmoral and Louvem producing properties incite us to recommend more work. The already known occurrences are small but they may possibly be extended by diamond drilling to become economically interesting. Production from the Beacon gold zone in the near future should be seriously considered.

CERTIFICATE

THIS IS TO CERTIFY THAT:

I am a resident of Val d'Or, province of Quebec, since 1971.

I have been engaged in mining exploration since 1964 and have been consulting geologist since 1972.

I am a graduate of Université de Montréal (B.Sc.1964 and M.Sc. 1967) and of Université Laval (Ph.D. 1973) in Geology.

I am a fellow of the Geological Association of Canada and also a member of the Association of Geologists of Quebec, of the Quebec Prospectors Association, of the Association Exploration Geochemists and of the Canadian Institute of Mining and Metallurgy.

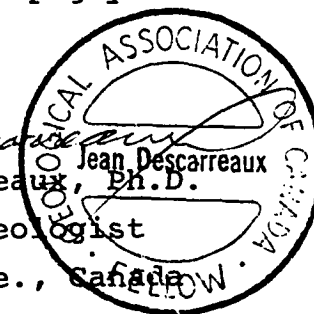
I have not been on the Beacon property of Dor Val Mines Limited but I have worked intermittently in Louvicourt township and in the surrounding area since 1964.

This report is based on the author's fifteen years experience in the district, on a comprehensive study of all the assessment work records and on geological maps and reports published on the area of interest by the Quebec Department of Natural Resources and by the Geological Survey of Canada.

I have not, directly or indirectly, received or expect to receive any interest, direct or indirect, in the property of Dor Val Mines Limited or any affiliate, or beneficially own, directly or indirectly, any securities of that company or any affiliate.

December 17, 1979


Jean Descarreaux, Ph.D.
Consulting Geologist
Val d'Or, Que., Canada



REPORT
ON THE BEACON PROPERTY
DOR VAL MINES LIMITED

INTRODUCTION

The Beacon property located in Louvicourt township, northwestern Quebec, has recently been acquired by Dor Val Mines Limited. It consists of 32 contiguous blocks and claims for a total of approximately 1737 acres. The claims are listed in appendix and are located on the compilation map.

The assessment work files available at the Quebec Department of Energy and Resources have been carefully studied and compiled. Geological reports and maps published by the Quebec Department of Energy and Resources and by the Geological Survey of Canada have also been reviewed.

This report includes an appraisal of the available data and recommendations to carry out an exploration program for gold and copper mineralization.

LOCATION AND ACCESS

The Beacon property is located 10 miles east of Val d'Or, and less than one mile north of highway number 117. It is easily accessible by a road and the C.N. railway crosses the property.

Supplies, contractors and qualified manpower are available from Val d'Or, a city of 20,000 people serviced by 3 airlines. Water and electricity are readily available.

The topography is rather flat on the property, except for a few rock outcrops. A sand and gravel deposit lying in the northern part of the property could eventually be used to improve access.

REPORT ON THE DOR VAL PROPERTY

HISTORY OF EXPLORATION AND DEVELOPMENT

Gold was discovered on the west part of the present property by Georges Bussi re in September 1930. Twenty claims then staked were transferred to Le Roy Mines Limited. During the year the gold-bearing Le Roy vein was traced 1,000 feet near range line VII-VIII. In the following year a vertical two-compartment shaft on this occurrence was sunk, reaching a depth of 269 feet in 1932. Le Roy Gold Mines Limited, acquired the property in 1931. This company became bankrupt in 1932 after some 500 feet of lateral workings were completed. The ground reverted to Bussi re and associates who optioned it in 1934 to Maple Leaf Mines Limited. The same year a new company, Newroy Gold Mines Limited, was formed and additional lateral work and resampling done underground and 4,000 feet drilled. This yielded disappointing results and operations were suspended. In 1936 Beaucourt Gold Mines Lt e. was incorporated and surface work resumed. In 1937, 12,066 feet of drilling was completed. In 1939 McIntyre-Porcupine Mines Limited drilled some 11,000 feet under option.

The east part of the Beacon property was staked in 20 claims in 1930 by Karl Springer and associates for Connell Mining & Exploration Limited. Extensive surface work was done in 1931-32 on the Connell plug gold-quartz discovery. In 1932 these claims were sold to the newly-formed Louvicourt Mines Limited.

In 1940 both Beaucourt and Connell sections were optioned by Teck Exploration Company Limited. In 1940-41 in excess of 46,000 feet were drilled on the combined property. The Le Roy shaft was dewatered and resampled with some additional drifting done on the second level. Lateral advances on the two levels now totalled about 1,200 feet. A lens about 110 feet long E-W, 3 to 4 feet wide, was estimated by

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Sharpe (1968) to average 0.20 oz. Au/ton for 300 feet down dip. The option was exercised in 1941 with the incorporation of Beacon Mining Company Limited. Teck Corporation held 68.7% interest in Beacon as of 1973.

Drilling of 24,970 feet in 1947 apparently resulted in the discovery of the Beacon shaft gold zone. The Beacon shaft located 5,150 feet northeast of Le Roy shaft, was sunk in 1949-50 to a depth of 420 feet with 4 levels 100 feet apart. Linear development (drifts, crosscuts, raises and shafts) totalled 2,150 feet. Development ore totalling 406 tons at 0.175 oz. Au and 2,662 tons of vein rock grading 0.666 oz. Au were stock-piled. A lens 360 feet long, 5 to 25 feet thick, occurring between 200 and 300 levels was estimated to contain 37,000 tons averaging 0.6 oz. Au.

In 1951, 12,000 feet of drilling was done on a copper zone in the southwest part of the property. Nothing of interest was cut to depth of 1,000 feet.

Geophysical partial coverages were run in 1968 following the discovery of the Louvem deposit on the property adjoining to the east. Extensive drilling (22,804 feet) of geophysical anomalies followed in 1968-69, resulting in the discovery of a small deposit at the "E" anomaly in the southwest section of the property. Over a length of 600 feet and across widths of 10 to 15 feet, the deposit was estimated to contain 150,000 tons averaging 1.75% Cu down to 450 feet (N. Miner, July 20, 1972). A second area, located 1,200 feet to the southwest yielded interesting intersections, best being 1.8% Cu over 26 feet of core.

Soquem optioned the property in 1972 before doing geophysical surveys on a few sections of the property. Soquem drilled 11 holes for a total of approximately 11,500 feet.

GENERAL GEOLOGY

The Val d'Or district is located in the southern

REPORT ON THE BEACON PROPERTY

part of the Abitibi volcanic belt of the Superior province of the Canadian Shield. The Precambrian volcanic, sedimentary and intrusive rocks of the area are Archean in age, except for late diabase dykes.

Thick piles of lavas and pyroclastic rocks trend eastward across the area, dip steeply north, and generally face southward. Graywacke, arkosic graywacke and other sedimentary rocks are intercalated with the volcanic units, and an extensive area of sedimentary rocks, metamorphosed to quartz-biotite schists, occurs south of the volcanic assemblage.

Numerous intrusions, which range in composition from pyroxenite to granitic rocks, invade the volcanic rocks. The most extensive of these are swarms of dioritic sills and large plutons of granodiorite, such as the Bourlamaque batholith.

The volcanic and sedimentary rocks exhibit variable states of dynamic, thermal and metasomatic metamorphism; the most prevalent is the development of moderately schistose fabrics and chlorite, epidote and sericite. Higher degrees of metamorphism are found near the larger plutons and in biotitic and amphibolitic rocks in the south part of the area.

The prime deformation structures are extensive longitudinal schist zones and sets of transverse faults. Although some interformational folds are recognized, the main part of the volcanic units appear to face south and occupy an overturned homocline with a gross stratigraphic thickness exceeding 5 miles.

GEOLOGY OF THE PROPERTY

The Beacon property straddles the southeast contact of the Bourlamaque granodiorite batholith with the older surrounding volcanic rocks. This contact is sharp but irregular.

The volcanic flows consist of basalt, andesite, da-

REPORT ON THE DOR VAL PROPERTY

cite and rhyolite. They are interbedded with abundant sequences of tuf and agglomerate. The volcanic rocks are part of the Malartic Group. They strike at 060° , dip steeply to the north and face south. They are locally sheared. Sills and dykes of diorite, granodiorite and porphyry have been mapped. The Connell plug is considered to be a satellite intrusion of the Bourlamaque granodiorite batholith.

ECONOMIC GEOLOGY

The most important current and former gold producers in the Val d'Or area are located close to or within the Bourlamaque granodiorite batholith, or associated with small satellite intrusions of the same batholith (see the geological map of the area). The Belmoral gold mine recently brought into production is within this batholith, only five miles north-west of the Beacon property. There exist a genetic and spacial relationship between this batholith and gold deposits in the area, although this type of metallogeny is not yet fully understood.

Volcanogenic copper-zinc deposits were also found in the Val d'Or area. The Manitou-Barvue, Rainville, Quebec Manitou, East Sullivan, Dunraine and Louvem deposits are typical of this metallogenic type of mineralization. The Louvem mine is adjoining the Bevecon property to the east. Five mineralized zones have been delineated since the first discovery in 1968, three of them are copper deposits and the other two are zinc deposits. All the Louvem deposits are located immediately south of zones of greenish agglomerate containing felsic bombs. These areas are shaped like ellipsoids (500 feet X 1100 feet) on an horizontal section). The distance in between two ellipsoidal zones of greenish agglomerate containing felsic bombs is usually 1200 feet at the Louvem property and the same favorable sequence which contains the zones of

REPORT ON THE DOR VAL PROPERTY

greenish agglomerate and the ore deposits extends west on the southeastern part of the Beacon property, on block 39. Other volcanic units located further north are also favorable for copper mineralization, such in the vicinity of the "B" copper zone.

Several gold and copper occurrences have been discovered over the years on the Beacon property. The best ones are located on the compilation map and described below, starting with the gold occurrences.

1) The Le Roy shaft area is at range-line VII/VIII, 2,500 feet east of the western township boundary. The shaft extends to a depth of 269 feet and approximately 1,200 feet of lateral openings were made on two levels.

The workings followed a sinuous zone of pyritic quartz-tourmaline veins and stringers which pinch and swell along a lateral distance of 700 feet. The zone strikes north-east and dips 55° south. It outcrops 250 feet north of the margin of the granodiorite which, near the shaft, dips 80° south. A drill-hole collared 600 feet south of the shaft intersected a quartz vein with low gold values at a depth of 450 feet, adjacent to the granodiorite contact. This vein lines up with the down-dip projection of the Le Roy vein.

From incomplete data on assays, Sharpe (1968) estimate that the medial part of the Le Roy vein, 110 feet in an east-west direction and 300 feet down the dip, has a tenor of the order of 0.20 ounce of gold per ton and an average width of 3 to 4 feet (approximately 10,000 tons).

2) The Beacon shaft area is 6,500 feet east of the western township boundary and 2,200 feet south of range-line VIII/IX. The deposit was explored in 1950 from a shaft 425 feet deep by 2,150 feet of drifts, crosscuts and raises. The main vein strikes $N 60^{\circ}E$, dips $50^{\circ}W$ and lies along a sheared zone within a small apophysis of granodiorite, 50 to 200 feet

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from its contact with volcanic rocks (see vertical section).

The gold occurs in a zone of small veins and in a large lens of quartz with tourmaline, pyrite, chalcopyrite and, locally, tellurides. The maximum dimensions occur between the 200-foot and 300-foot levels where the lens is 360 feet long and 5 to 25 feet thick. To the east and west and up the dip (where the vein approaches the margin of the granodiorite) the lens pinches abruptly. The thickening of the vein coincides with a local southward bulge of the granodiorite's contact.

The deposit was estimated to contain 37,000 tons with approximately 0.6 ounce of gold per ton.

3) The "Connell plug" is a satellitic pluton, similar in composition to the Bourlamaque batholith. The southeast margin of the plug, which is situated 8,800 feet east of the township boundary and 1,500 feet north of range-line VII/VIII, has a concentration of en échelon veins and irregular masses of pyritic auriferous quartz. Parts of these were exposed in trenches and tested by 23 drill holes and numerous short drill holes.

Individual veins appear to be discontinuous but tend to follow erratically developed schistose zones within both the granodiorite and, to a lesser extent, the adjacent volcanic rocks.

Low quantities of gold are present in most intersections of the veins; generally less than 0.1 ounce of gold per ton over widths of the order of 2 feet. The most continuous zone of veins tend to be richer where they adjoin narrow chloritized dikes.

4) Several other gold-bearing veins have been discovered elsewhere on the property, within the granodiorite batholith near its contact with the volcanic rocks (49 + 00E-43 + 00N-B.L."B" and 41 + 00E-39 + 00N-B.L."B"), and within the

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volcanic rocks away from this contact (31 + 00W-8 + 50S-B.L. "B" and 50 + 00W-9 + 00S-B.L. "B").

5) Zone "E" is located in the east-central part of the property, between lines 25 + 00E and 31 + 00E, at 3 + 50N to 5 + 50N, (base line B). The zone was found by diamond drilling carried out to test a prominent I.P. anomaly.

Zone "E" is estimated to contain 150,000 tons of 1.75 percent copper (before dilution) to a depth of 450 feet. It is tabular in form, strikes N60°E and dips 70° north. It extends over a strike length of 600 feet to a depth of 450 feet, with widths ranging from 6 to 20 feet. It has not been fully developed by diamond drilling. According to drill logs, the host rock is an intensely chloritized, sheared dacite. The dacite is in contact with rhyolites to the south, and andesitic rocks to the north. Chalcopyrite, pyrite, pyrrhotite and magnetite are the main ore minerals, and occur in disseminations and fine fractures.

6) Zone "D" is situated 1000 feet south of zone "E", and was traced by drilling over a strike length of 200 feet to a depth of 210 feet. It occurs in an area mapped as dacitic volcanics, but in drill logs the host rock is described as a rhyolite. This zone of copper mineralization dips steeply north, and the ore grade intersections range in width from 15 to 26 feet. This zone is still open, it has not been fully developed by diamond drilling.

7) Area "A" lies approximately 1000 feet south of Zone "D", in the east part of the property. Twelve holes were drilled to test coinciding S.P. and I.P. anomalies. The best intersections, 4.20%Cu/3.3' was encountered in B-68-17, and about twenty intersections in excess of 1%Cu/1.0' were located in some of the other drill holes. The mineralization occurs mainly in chloritized and fractured dacite.

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8) Area "B" occurs in the southeast corner of the property, approximately 1500 feet southeast of area "A". Five holes were drilled here to test a 2,200 ft. long I.P. anomaly to a depth of 300 feet. The drilling indicated the presence of a zone of pyrite mineralizations with minor copper values.

The I.P. anomaly is situated on strike with the Louvem deposits, and does not appear to have been tested sufficiently. Since pyrite mineralization is associated with the Louvem deposits, the presence of a pyritic zone encountered in holes B-68-7 and B-68-8 is considered encouraging. Furthermore, a zone of favorable greenish agglomerate occurs in this area.

9) Area "C" is located in the westernmost part of the property and was tested by two diamond drill holes in 1968. Hole B-68-4 encountered 1.60%Cu/2.0', and hole B-68-5 intersected 2.72%Cu/3.5'.

Previous drilling done by Teck in 1951 in the area of the present I.P. anomaly included holes Nos. 99, 102 and 105. The best intersection was obtained in hole 102 which encountered 1.5%Cu/2' and 1.7%Cu/1.5'. The mineralization is reported to have occurred in "porphyritized volcanics", and andesite, with associated agglomerate and tuff.

10) Several other copper intersections have been encountered elsewhere on the property. The best of these is from hole B-100 at L-4 + 00W, 2 + 00N (B.L. "B") where a section of 3.5 feet returned 4.30%Cu. This section corresponds to an anomaly of Induced Polarization number 8. It is on strike with zone "E" described above. Another interesting section was found at L50 - 00W, 3 - 50S (B.L. "B"), 2.6%Cu over one foot.

REPORT ON THE DOR VAL PROPERTY

CONCLUSIONS

A lot of exploration was done over the years on the Beacon property and many gold and copper occurrences have been discovered. None of these occurrences were economically interesting in the past. However, the going price of gold and the geological informations now available from the adjoining Louvem and Belmoral producing properties incite us to recommend additional work.

Priority should be given to the Beacon gold zone where production on a small scale can possibly be initiated in the near future (37,000 tons averaging 0.60 ounce of gold per ton). The Le Roy gold-bearing vein and the "E" copper zone, both with small tonnages already indicated, and several other showings are interesting occurrences which could possibly be enlarged by additional work. The electromagnetic anomalies expected to be found in the granodiorite Bourlamaque batholith should be tested by drilling, since these anomalies may represent shear zones similar to those which host the Belmoral gold deposits within the batholith.

REPORT ON THE DOR VAL PROPERTY

RECOMMENDATIONS

The following program is recommended to further develop the best gold and copper occurrences already known to occur on the property, and to find and explore new targets. Priority is given to the Beacon gold zone.

Phase I

-Line cutting, lines 400 apart, total of 50 miles X \$160./mile (including base lines and tie lines)	\$8,000.00
-V.L.F. electromagnetic survey, 40 miles X \$160./mile	\$6,400.00
-Detailed compilation and study of previous surveys and drill holes	\$5,600.00
-3 diamond drill holes to confirm the Beacon gold zone (including engineering and assays)	<u>\$40,000.00</u>
Total of Phase I	\$60,000.00

Phase II

-Feasibility study and	
-Dewatering and preparation to mine the already known reserves of 37,000 tons grading 0.60 ounce of gold per ton, estimated at	\$750,000.00

Phase III

-Diamond drilling size "B"

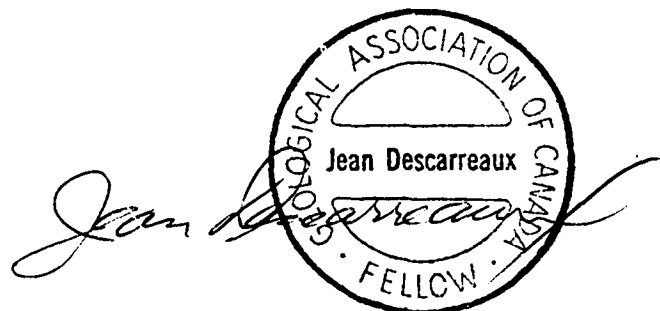
<u>Area</u>	<u>Footage</u>
Le Roy gold-bearing vein	5,000
Connell plug	2,000
Copper zone "E"	5,000
Copper zone "D"	2,000

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Area "A"	1,000	
Area "B"	2,000	
Area "C"	1,000	
Other areas (such as EM anomalies in the Bourlamaque batho- lith)	7,000	
Total of 25,000 feet X \$20./foot (including en- gineering and assaying)		\$500,000.00

Phase IV

Additional drilling will most probably be warranted in order to further develop the most promising mineralized zones studied in phase III.



December 17, 1979

Jean Descarreaux, Ph.D.

BIBLIOGRAPHY

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Campiglio, G.: Bourlamaque Batholith, Q.D.N.R., Special Study No. 26.

Sharpe, J.I.: Louvicourt Township; Geol. Rept. 135, pp. 29-33, 1968, map no. 1623.

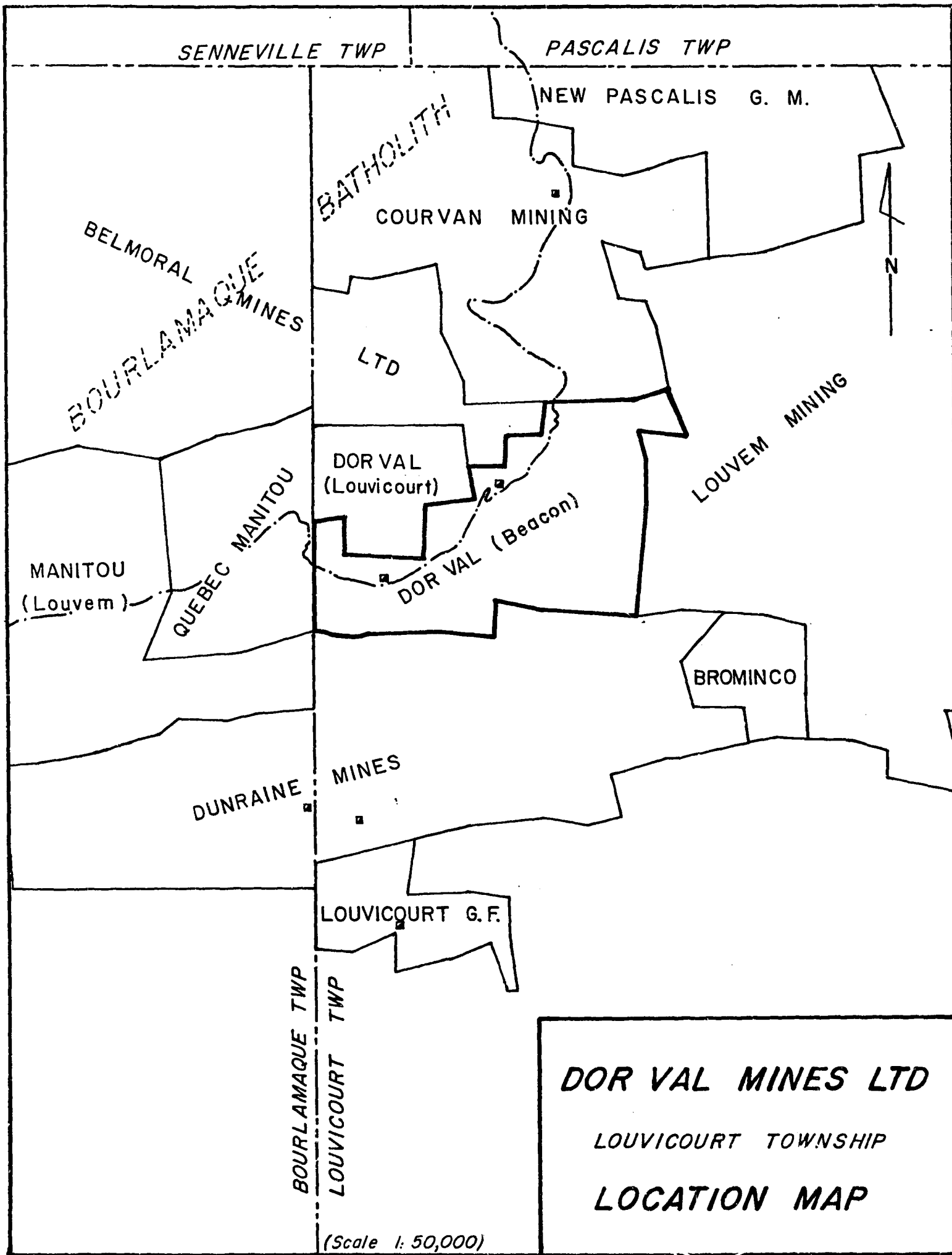
APPENDIX "A"CLAIM LIST

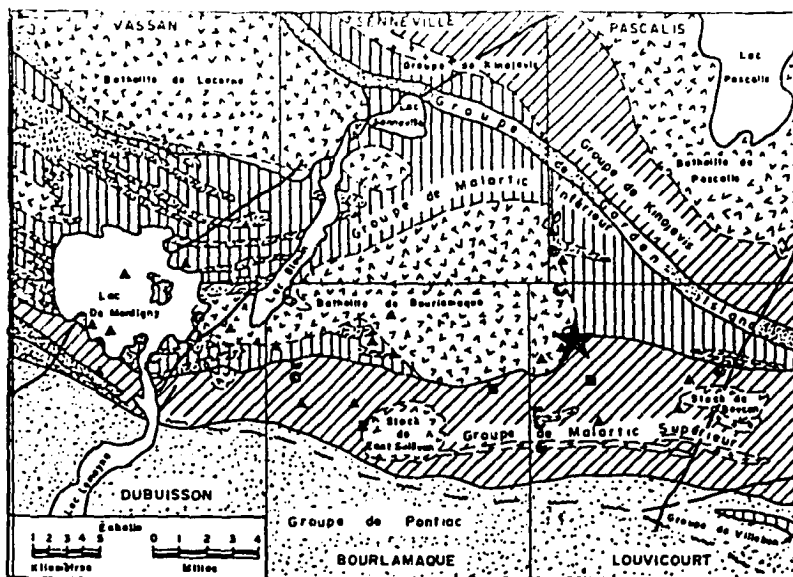
<u>CLAIM OR BLOCK NO.</u>	<u>RANGE</u>	<u>AREA (ACRES)</u>
BL. 18	VIII	
BL. 19	VII and VIII	
BL. 20	VII	
BL. 21	VII and VIII	
BL. 22	VII	
BL. 23	VII and VIII	
BL. 24	VII	
BL. 25	VIII	
BL. 26	VII and VIII	
BL. 27	VII	
BL. 28	VIII	
BL. 29	VII and VIII	
BL. 30	VII	
BL. 31	VIII	
BL. 32	VIII	
BL. 33	VII and VIII	
BL. 34	VIII	
BL. 35	VIII	
BL. 36	VII and VIII	
BL. 37	VIII	
BL. 38	VIII	
BL. 39	VII and VIII	
A-33703	VIII	
A-33964	VIII	
A-33969	VIII	
A-33977	VIII	
A-33978	VIII	

A-60316	VIII and IX
A-60317	VIII and IX
A-66786	VIII.
207637-5	VIII and IX
369267-1	VIII

Concession number 356 consists of blocks number 18 to 39 (included) listed above for a total of 1,347 acres. The whole property makes a total of approximately 1,737 acres.

These contiguous 32 blocks and claims are located in the north-west quarter of Louvicourt township, northwestern Quebec.

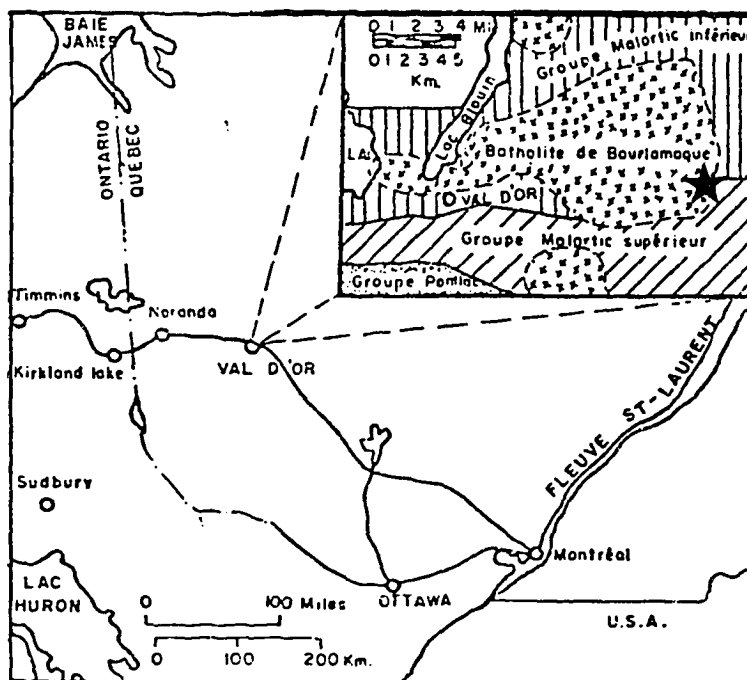




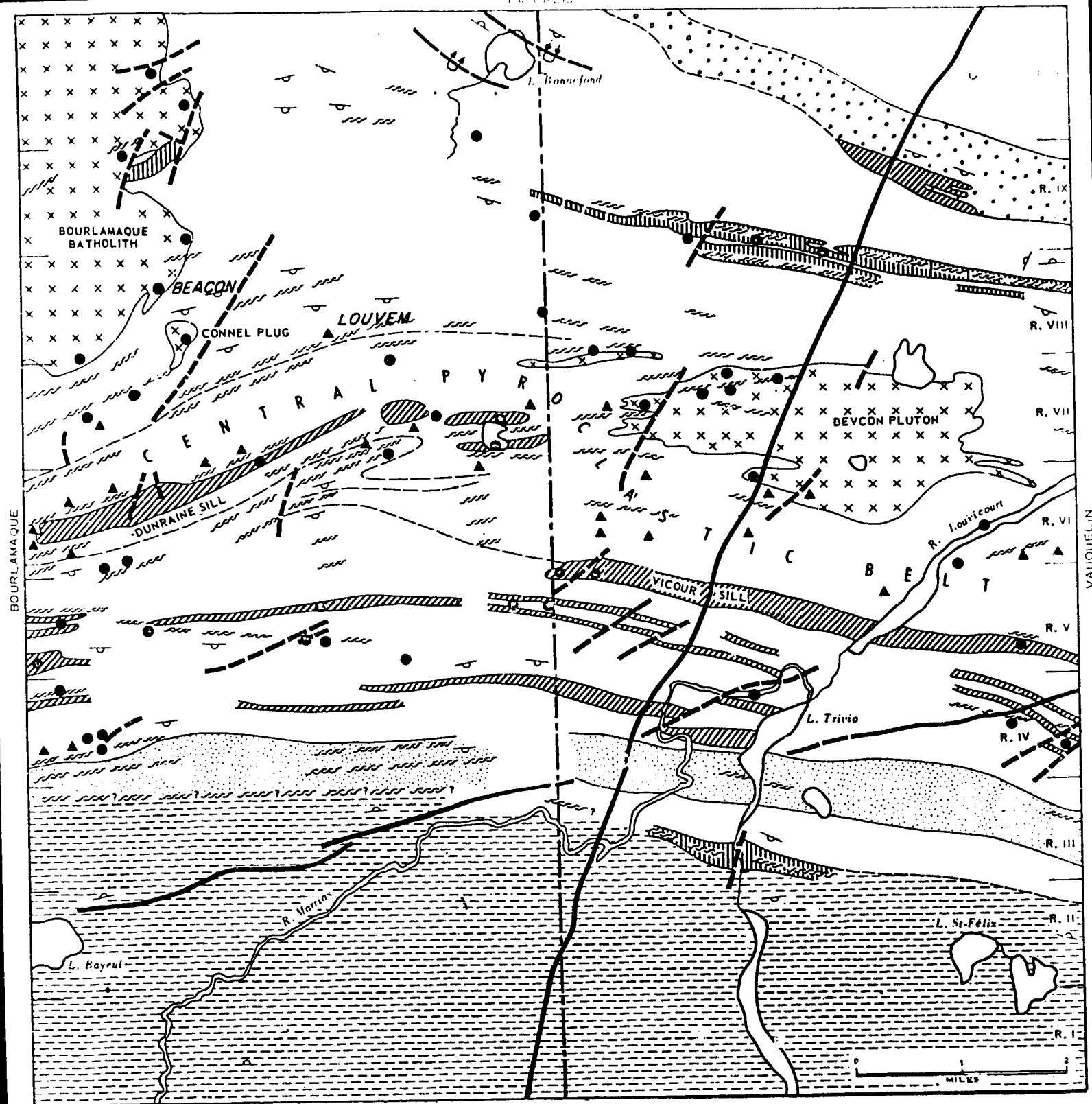
LEGEND

Upper Precambrian (Proterozoic)	
	Diabase dykes, gabbro and olivine gabbro
Lower Precambrian (Archean)	
	Granitic and granodioritic intrusions
	Dioritic and gabbroic intrusions locally metamorphosed to amphibolites
	Mafic and ultramafic intrusions (gabbro, peridotite,...) metamorphosed to pyroxenites, amphibolites, serpentinites, ...
	Argillaceous-gritty and conglomeratic metasediments
	Metabasalts and meta-andesites (lavas predominantly, few extensions)
	Meta-andesite, meta-dacite and a few meta-rhyolites (numerous extensions)
	Gold mine
	Cu, Zn, Pb, or Mo and Bi mine
	Exploration shafts
	Property of Dor Val Mines Ltd

GEOLOGY OF VAL D'OR AREA



LOCATION MAP



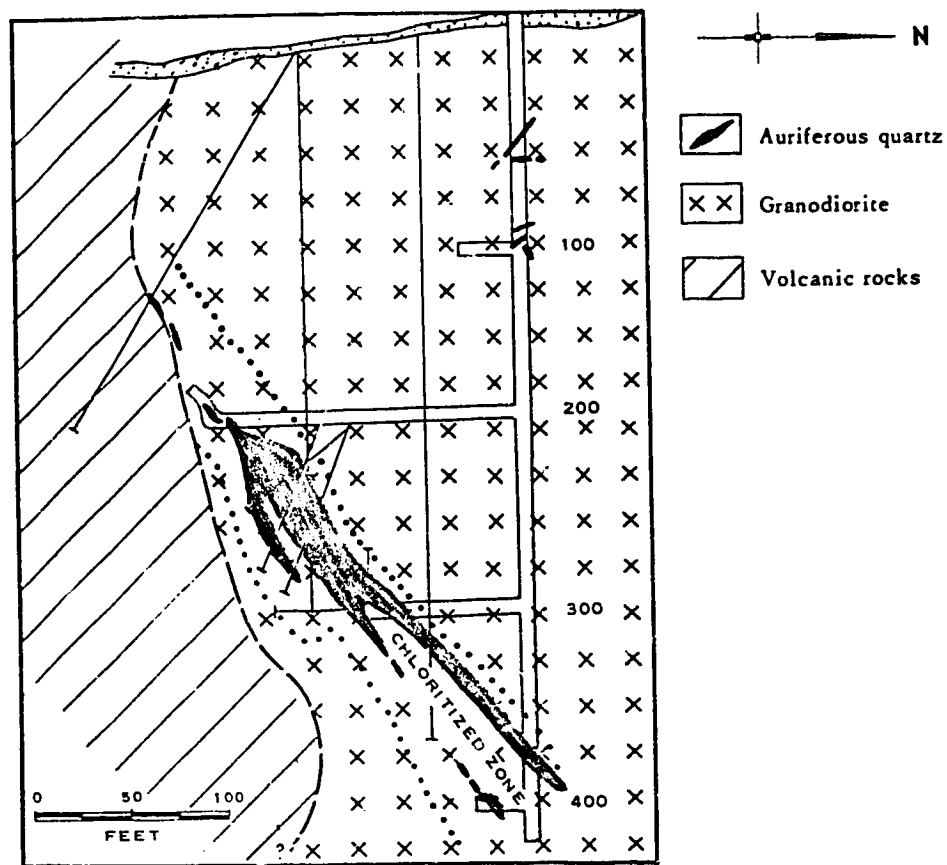
- LATE PRECAMBRIAN**
- Diabase dike
- EARLY PRECAMBRIAN**
- Granodiorite and allied rocks
 - Diorite gabbro
 - Serpentinized ultrabasic rocks
 - Mainly volcanic rocks

- PONTIAC GROUP**
- Metasedimentary schists
- TRIVIG GROUP**
- Sedimentary rocks
- GARDEN ISLAND LAKE GROUP**
- Sedimentary rocks

- SYMBOLS**
- Copper, zinc
 - Gold
 - Top determination
 - Longitudinal shear zone
 - Assumed transverse fault
 - Fold axis: (a) anticline, (b) syncline

GENERAL STRUCTURE AND STRATIGRAPHY

LOUVICOURT TOWNSHIP



J.I. SHARPE, 1964

D.N.R.O. 1967 B-898

VERTICAL SECTION THROUGH BEACON SHAFT

LEGEND

1	Felsic intrusive	Cu	Copper
1D	Granodiorite	Py	Pyrite
1X	Aplite	Po	Pyrrhotite
2D	Diorite	q	Quartz
3L	Mafic lamprophyre	Vq	Quartz vein
V2	Rhyolite	Δ	Brecciated
V4	Dacite	⊙	Pillowed
V6	Andesite	⊞	Porphyritic
V7	Basalt	⊞	Porphyry
V9	Tuff	≡	Sheared
V10	Agglomerate	γ	Carbonatized
Au	Gold	φ	Chloritized

